

REMARKS

The present invention relates to an areal metal element of the type used, for example, in the application of plaster. Although there are several embodiments of the invention described in the patent specification as well as shown in the patent drawing, claims 31 and 56, i.e., the only two independent claims, no longer cover the embodiment of the invention illustrated in Figs. 1-4 in the patent drawing. Claims 31 and 56, however, do cover the embodiment of the invention illustrated in Figs. 5-8.

The Patent Examiner has objected to the patent specification in paragraph 5 of his September 16, 2009 office action. The patent specification has been amended to overcome these objections.

In paragraph 6 of the September 16, 2009 office action, the Patent Examiner has objected to claims 32-55, 57-80, 82-83, 85-86, 88-89 and 91-92 because of the improper dependency. Accordingly, these claims have been amended to correct the dependency. The correction of the dependencies also overcome the Patent Examiner's objection to claims 55 and 80 under 35 U.S.C. § 101.

On a more substantive basis, the Patent Examiner has rejected claims 31, 56, 81, 84, 87 and 90 as unpatentably obvious under 35 U.S.C. § 103 over US Patent No. 4,545,170 to Shirey. Applicant, however, respectfully submits that this basis for rejection is in error and should be withdrawn.

More specifically, the reference to WO 86/06431 which is the same disclosure as the Shirey patent was cited during the PCT phase. Accordingly, the claims were amended to bring the two-part form which included the features from WO 86/06431 (Shirey) into the pre-characterizing part of the independent claims, now claims 31 and 56.

To better understand the wording of claim 31 it is recommended first to look at Figs. 1-4 of the present application which show an originally claimed embodiment. This embodiment is not longer claimed by the present claim 1 but shows a structure according to the pre-characterizing part of claim 31.

By using the cutting structure of Fig. 1 an areal metal element can be produced which comprises a central region 28, two sections 29, 30 which each consist of two outwardly disposed part sections 31, 33 or 34, 36 as well as a central part section 32 or 35 lying between them. The expression "lying between them" means that the two outwardly disposed part sections 31, 33 or 34, 36 are in each case connected by an intermediate central part section 32 or 35.

As can be easily imagined from Fig. 4 of the present application a cross section through the outwardly disposed part sections 31, 33 or 34, 36 and the intermediate central part section 32 or 35 would result in a Z-shape.

As already mentioned, the embodiment of Figs. 1-4 of the present application is not considered to be an embodiment of claim 31. Claim 31 has been amended to cover the more improved embodiment as shown in Figs. 5-8 of the present application. From a comparison of the cutting structure of Figs. 1 and 5 it can be seen that according to the present invention additional cuts 37, 38 have been placed within the basic cutting structure as shown in Fig. 1. Further, from Figs. 6-7 it is shown how based on this improved cutting structure the metal element of Fig. 8 can be produced.

The metal element of Fig. 8 has an improved stiffness according to the metal element of Fig. 4 since two identical sections 29 or two identical sections 30 are associated with each other and are arranged sequentially in a direction from a first side region 27 of the metal element. Thereby, each of the two outwardly disposed part sections 31, 33, 34, and 36 are directly

connected to the respective corresponding outwardly disposed part section 31, 33, 34, and 36 of the other section 29 or 30 by an areal region 24 or 25 of the metal element as it is described in the characterizing part of claim 31 and can be seen in Fig. 8 of the present application.

This is different from the metal element shown in Fig. 8 of Shirey.

The metal element of Fig. 8 of this reference is produced from the cutting structure as shown in Fig. 6 of this reference. When comparing this cutting structure with the cutting structure of Fig. 5 of the present application an important difference can be recognized. While in Fig. 5 of the present application the original cutting structure of Fig. 1 has been amended by additional cuts 37 and 38, in the cutting structure of Fig. 6 of the cited reference no such amendment of the original cutting structure of Fig. 2 of this reference (which is similar to the original cutting structure of Fig. 1 of the present application) was made but the original cutting structure of Fig. 2 of this reference has simply been doubled without amending the principle cutting structure. However, this is not the solution of the present application.

When comparing Fig. 8 of the present application and of Shirey it is seen that in the metal element according to the reference simply the basis structure of Fig. 3 is doubled due to the doubling of the basic cutting structure.

Contrary to that, in Fig. 8 of the present application the structure shown in Fig. 8 is not a doubling of the structure shown in Fig. 4 but the original structure has been amended to have two identical sections 33 subsequently arranged between the outer edges 8 and 9 of the metal element, wherein the outer sections 31 of these two sections are directly connected by an areal region 25 of the metal element and the other outwardly sections 33 are also directly connected by an areal region 24 of the metal element.

Such a direct connection by an areal region is totally missing in the structure of Fig. 8 of Shirey. In addition, there is no association of two sections 29, 30 of the same type as it is seen in Fig. 8 of the present application and described in claim 31.

With the embodiment according to claim 31 of the present application an improved stiffness of the metal element can be achieved. This is also recognizable from the following figure which shows an end view of the metal element of Fig. 8 of the present application similar to the end view shown in Fig. 9 of Shirey.

When comparing these end views it is clear that in the embodiment of the invention an improved stiffness can be achieved in that the sections 29, 30, which are defined by the outwardly disposed part sections 31,33 and the intermediate central part section 32 are directly connected by the areal regions 24, 25 of the metal element which form two parallel layers in the weakened middle part of the metal element.

Such an overlaying double layer structure does not exist in Fig. 9 of Shirey which clearly shows that the structure of Shirey tends to kink much easier than the embodiment of the present invention.

Applicant therefore respectfully traverses the objections of the Patent Examiner and requests that new claim 31 of the present application fulfill the conditions of novelty and inventive step.

Independent claim 56 is also distinguished over Shirey.

Claim 56 is distinguished over Shirey since in this citation the structure is the opposite of the structure as claimed in the characterizing part of claim 56. For example, if looking at Fig. 1 of Shirey, it can clearly be seen that, in contrast to the present invention, the folding edges which are disposed more closely to the outer edges of a metal element point in the direction of the

other edge of the metal element. That means that for example in Fig. 4 of Shirey the folding edges 37 which are disposed more closely to the outer edge on the bottom of Fig. 4 point in the direction to the outer edge on the top of Fig. 4. On the other hand the folding edges 36 which are disposed more closely to the outer edge on the top of Fig. 4 point in the direction of the outer edge arranged on the bottom of Fig. 4.

For better understanding we enclose a copy of drawing sheets comprising Figs. 4 and 12 of the present application in which the folding edges 16, 17, 18, 19 as well as the outer edges 8, 9 have been colored. As can clearly be seen from this Figures, the folding edges 17 and 19, colored in red, are disposed more closely to the first outer edge 8, colored in orange and point in the direction of the first outer edge 8. In contrast, the folding edges 16, 18, colored in green, are disposed more closely to the second outer edge 9, colored in blue, and also point in the direction of the second outer edge 9.

By this different structure the metal component folding process is made easier. Through the folding process the ends of the webs (10, 11) are folded over along the fold lines 16, 17, 18, 19 (and not the material sections between the webs 10, 11 along the fold lines 43, 44 of Figs. 13-15 and 17) as can be seen in Figs. 2-12 of the application. This is in contrast to Shirey in which the much broader material section between the webs are folded.

From the above explanation it is clear that claim 56 of the present application is clearly distinguished over Shirey.

In view of the foregoing, applicant respectfully submits that claims 31 and 56 both patentably define applicant's invention over the Shirey reference and are, therefore, allowable. All remaining claims in this application now depend on either claim 31 or 56 and are, therefore, also allowable.

In view of the foregoing, applicant respectfully submits that this application is in condition for formal allowance and such action is respectfully solicited.

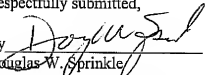
The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 07-1180.

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Respectfully submitted,

By


Douglas W. Sprinkle

Registration No.: 27,394

GIFFORD, KRASS, SPRINKLE, ANDERSON
& CITKOWSKI, P.C.

2701 Troy Center Drive, Suite 330

Post Office Box 7021

Troy, Michigan 48007-7021

(248) 647-6000

(248) 647-5210 (Fax)

Attorney for Applicant